

BOROUGH OF CAMBRIDGE

(EDUCATION COMMITTEE).

REPORT

ON

Medical Inspection

AND

Dental Inspection and Treatment

OF

Elementary School Children

For the Year 1919.

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Report of School Medical Officer.

FOR THE YEAR 1919.

Number of Schools, 24 ; Number of Departments, 43 ; Average number on Roll, 8493 ; Average Attendance, 7208.

Routine medical inspection was resumed on May 26th, 1919, on the return of the Assistant School Medical Officer (Dr A. Mabel Gurney) from War Service.

The following figures show the numbers examined in each of the groups mentioned :—

	Boys.	Girls.	Total.
Entrants ...	335	336	671
Intermediate group	106	77	183
Leavers ...	229	163	392
	<hr/>	<hr/>	<hr/>
	670	576	1246
	<hr/>	<hr/>	<hr/>
Special cases ...	92	64	156

The numbers examined in the first three groups (the routine inspections) were 17·2 per cent. of the average attendance. Including the special cases the proportion was 19·4 per cent. of the average attendance. The number of visits paid to the schools for routine inspection was 81, the average number inspected at each visit being 17·4.

The proportion of children accompanied by a Parent at routine inspections was 52 per cent.

Inspection and Treatment Clinic.—The work carried on here includes the examination of children referred for further examination from the Schools, and since September, 1916, the treatment of minor ailments. So far it has been carried on in the Nurses' room at the Guildhall, but the work has grown so rapidly that it is now no longer possible to accommodate all who attend. Premises have been taken at 35 Parkside, where the Dental and Eye Clinics are already established, and as soon as the necessary alterations have been completed the whole of this work will be transferred there.

The number *attending* each year has been 1916, 330 ; 1917, 457 ; 1918, 449 ; and 1919, 908.

The conditions and numbers of children *treated* were :—

	Children treated.	Eye disease.	Otorrhœa.	Sores & Skin diseases.	Ringworm.	Others.
1916	258	14	30	205	9	—
1917	249	36	15	174	10	14
1918	365	59	—	160	43	103
1919	738	146	13	301	29	249

General Physique—Records of Height and Weight.—The opinion has been frequently heard during the War that the general condition of children and especially of infants is, if anything, better now than formerly. This year for the first time records of the height and weight are available for comparison and although in some of the groups the numbers are very small, the results are interesting when compared with the years 1913 and 1914, the last two pre-war years.

The actual number examined at each age is perhaps too small to base any very accurate conclusions upon, but the records of Height and Weight so far as they go, taken in conjunction with the record of general nutrition together with the whole impression got during inspection, all seem to suggest that the condition of the youngest children up to 7 or 8 years compares favourably with pre-war records of these conditions, while the older children appear on the whole to compare quite unfavourably with children of the same ages in 1913—14.

As for the reasons for this falling off in condition of the older children, it can scarcely be a question of feeding as all children would probably be equally affected by any change in this. Older children have we believe being injuriously affected by daylight saving, an opinion which was expressed in the Annual Report for 1916, p. 7. They are less under parental control than the younger ones, and it has been frequently observed that this has been somewhat relaxed during the war, while also they are of an age when the picture theatre makes a very strong appeal. It is scarcely possible to do more than advance these points as a somewhat speculative explanation of an interesting fact brought out by the first routine inspection since the war ended.

Boys (Height and Weight).

Years	No. Examined 1919	Average Height in Inches.			Average Weight in Pounds.		
		1913	1914	1919	1913	1914	1919
3	33	35·98	35·70	37·43	33·27	31·88	32·70
4	72	38·12	38·57	37·89	34·65	35·69	36·00
5	106	40·89	40·69	40·82	38·98	38·66	39·25
6	124	43·13	43·01	42·72	43·00	43·13	42·88
7	43	44·98	44·74	45·30	46·46	46·11	48·00
8	106	48·40	47·30	46·01	53·13	51·63	51·10
9	11	49·44	49·73	46·36	56·61	57·29	49·88
10	3	50·43	50·64	48·16	59·11	60·01	53·50
11	12	52·86	53·27	52·62	67·00	67·51	64·93
12	91	54·76	54·68	53·10	73·33	72·34	71·24
13	124	56·32	56·22	57·32	78·76	77·29	77·82
14	14	57·75	58·33	58·14	83·55	87·72	88·41

GIRLS (Height and Weight).

Years	No. Examined 1919	Average Height in Inches.			Average Weight in Pounds.		
		1913	1914	1919	1913	1914	1919
3	44	35·11	35·62	35·47	31·33	31·58	31·17
4	71	37·94	38·05	37·66	34·59	34·49	34·40
5	108	40·60	40·76	40·25	38·83	37·99	37·36
6	113	42·83	42·57	42·18	42·19	41·22	40·24
7	24	44·62	44·81	44·46	45·57	46·10	44·38
8	77	47·05	47·14	46·48	49·80	50·23	49·44
9	8	49·79	49·17	48·72	55·18	55·25	50·62
10	4	50·61	50·76	49·81	59·09	58·36	52·44
11	5	54·04	53·38	52·75	69·54	66·22	63·30
12	83	55·39	55·98	54·91	73·90	76·81	74·54
13	70	56·89	57·53	57·65	81·24	81·17	82·91
14	10	59·28	60·19	58·22	91·14	89·25	85·60

Nutrition.—Under this heading is recorded the opinion of the Inspector at the moment of inspection as to the child's physical condition as judged apart from measurements of height and weight. There is no absolute standard, it is a matter of opinion, and so is liable to variation with the Inspector, or even at different times with the same Inspector. In the present case all the inspections, pre-war as well as post-war, have been made by Dr Gurney, so that though her standard may have been unconsciously altered in the course of time, the comparison with previous years is valuable and more especially if the conclusions support those based on Height and Weight records.

Taking the proportion per 100 children of all ages examined, a comparison of 1913 with 1919 gives the following result from which it would appear that the post-war condition of the children does not compare favourably with their former condition.

	Boys.		Girls.	
	1913	1919	1913	1919
Above Average	10·5	10·4	10·2	10·2
Average ...	72·3	65·9	76·0	73·3
Below Average	16·7	23·7	13·8	16·5

Further analysis of the figures shows that it is among the children (both boys and girls) aged 6 to 14 years that the deficiency is to be found, a result in practical agreement with the conclusions based upon the pre-war measurements of height and weight.

	Ages 3—5.		Ages 6—14.	
	Boys.	Girls.	Boys.	Girls.
Above average ...	16·6	12·3	7·9	9·0
Average ...	68·6	77·3	64·8	71·1
Below Average ...	14·8	10·4	27·4	19·9

Clothing and Footgear.—From the figures given below it will be noted that there is astonishingly little difference, in fact a slight improvement, in respect of clothing and footgear as compared with 1913. It would seem as if increased prices had been compensated by increased incomes, and that the figures show no falling off in parental care in this respect. The figures given are the proportions per 100 children found to have satisfactory clothing and boots.

	Boys.		Girls.	
	1913	1919	1913	1919
Clothing ...	94 $\frac{0}{100}$	96 $\frac{0}{100}$	97 $\frac{0}{100}$	97 $\frac{0}{100}$
Footgear ...	93 $\frac{0}{100}$	95 $\frac{0}{100}$	94 $\frac{0}{100}$	96 $\frac{0}{100}$

Cleanliness.—The Nurses have continued to make special inspections in all the schools, devoting attention chiefly to girls and infants. Although there is a great improvement as compared with the condition of things found when medical inspection was first commenced in 1907, there has undoubtedly been some falling off during the War.

The number of visits to the schools for this purpose was 109 as compared with 115 in 1918, 285 in 1917, and 206 in 1916.

The number of examinations made was 14,413; the numbers for 1918 being 15,178; for 1917, 28,132; and for 1916, 24,224.

The proportion found to be free from nits and pediculi was 73·3 per cent., as compared with 84·9 per cent. in 1918; 82·6 per cent. in 1917, and 80 per cent. in 1916.

The proportion found to be in a very lousy condition and requiring immediate exclusion from school was 1·5 per cent.

Ringworm.—The number of cases under treatment in 1919 was 67, as compared with 39 in 1918, 49 in 1917, and 99 in 1916. Nine of the cases were carried over from 1918, the number of new cases in 1919 being 58 as compared with 33 in 1918, 38 in 1917, and 84 in 1916.

The scalp was affected in 37 and the body in 21 instances. Of the scalp cases 21 were treated by X-rays at Addenbrooke's Hospital, and with the exception of 9 cases of the scalp, all were cured at the end of the year.

Eye Disease.—External Eye Disease was noted in 57 children or 4·5 per cent. of the children inspected. The conditions were: Blepharitis 14, Conjunctivitis 22, Strabismus (Squint) 16, Corneal Opacities 1, Ptosis 1, Styes 3.

Defective Vision.—The number of children found at routine medical inspection with defective vision was 42 (24 boys and 18 girls) or 5·9 per cent. of those whose vision was tested.

Of the 42 children mentioned above, 3 boys and 5 girls had internal strabismus, and 3 boys and 2 girls had conjunctivitis as well as defective eyesight.

Enlargement of Glands.—Enlarged glands (chiefly anterior cervical) were found in 675 children. The proportion was highest among the “entrant” group (55 0/0), and lowest in the “leavers” group (30 0/0), boys showing a slight excess over girls.

Enlarged Tonsils and Adenoids.—3·1 per cent. of the children had much enlarged tonsils requiring operative treatment, and 7·3 per cent. presented symptoms of adenoids.

Ear Disease and Defective Hearing.—The proportion with middle ear disease was 1·5 per cent., and with defective hearing 1·1 per cent.

Diseases of the Lungs.—Six children were found on routine inspection with symptoms suggestive of pulmonary tuberculosis, while 42 (3·1 per cent.) had symptoms of bronchitis.

Heart Disease.—Seventy-one cases were noted with either murmurs or irregularities in action (41 boys and 30 girls). Entrants 5·5 per cent.; Intermediates 6·0 per cent. and Leavers 5·8 per cent.

Defects of Speech.—Fifty-four children were found with some speech defect varying from mere indistinct articulation in 30 to stammering in 9 cases.

Other Defects.—These include :—

Anaemia	...	...	135 cases or 9·9 per cent.
Nervous Diseases	...	...	22 cases or 1·6 per cent.
Rickets	...	...	5 „ „ 0·4 per cent.
Deformities	...	...	6 „ „ 0·5 per cent.
Skin Diseases	...	...	62 „ „ 4·6 per cent.

Vaccination.—The proportion found with vaccination marks varied from 35 per cent. among “entrants” to 70 per cent. among “leavers.” There is sufficient evidence here of the unfortunately progressive neglect of this important safeguard against Small-pox. Further evidence of this will be found on page 13 of the Annual Report of the Medical Officer of Health.

Infectious Diseases.—The number of notifications received from Head Teachers and School Attendance Officers was as follows :—

	1916	1917	1918	1919
Influenza	—	—	296	113
Measles	25	160	225	463
Measles Contacts ...	—	—	—	59
German Measles ...	4	2	16	5
Whooping Cough ...	427	20	614	38
Chicken Pox	172	156	108	175
Mumps	310	31	13	37
Ringworm	85	35	32	41
Scabies (Itch)	24	17	3	4
Skin Diseases	47	18	10	29
Others	275	309	488	463
Totals	1369	748	1805	1427

The number of visits of enquiry paid by the School Nurses to homes was 1,703, the number in 1918 being 1,845, the number in 1917 being 1,431, and in 1916, 3,087. The causes of absence were:—Measles 686, Whooping Cough 23, Chicken Pox 112, Influenza 60, Ringworm 59, Mumps 34, Impetigo 20, defects revealed by previous medical inspection 55, Scarlet Fever 4, Diphtheria Contacts (all of whom were swabbed) 204, Post Scarlatinal and Diphtheria cases 179, and all other conditions (colds, sore throats, skin diseases, etc.) 655.

Forty-four visits were paid to schools in connection with Diphtheria cases. The total swabs taken in the schools was 1801, of which 43, or 2·3 per cent. gave positive results.

School Closure.—It was necessary to recommend the closure of the following schools on account of Measles:—Abbey Infants', New Street Infants', St Paul's Infants', Brunswick Council Infants', and Brunswick Council Boys' (Standard 1); Occupation Road Infants' on account of Diphtheria and Measles, and St Andrew's Girls' School on account of Diphtheria.

Treatment at Addenbrooke's Hospital.—The number of hospital recommendations given was 146 as compared with 138 in 1918, 109 in 1917, and 124 in 1916. The conditions for which treatment was required were:—Ringworm 23, Diseases of the Eyes 21, Diseases of the Ears 14, Tonsils and Adenoids 30, Abscess 3, Debility 3, Goitre 3, Skin Diseases 7, Injuries, and various other conditions 42.

Inspection and Treatment Clinic.—The number of children in attendance was 908, the total number of visits paid to the Clinic being 3,138. The number requiring treatment was 738, the conditions being Impetigo 301, Scabies 30, Ringworm 29, Eye Defects 146, Ear Diseases 13, Others 219.

Summary of School Nurses work :—

	1916	1917	1918	1919
Visits to Homes	3,087	1,431	1,845	1,703
„ „ Schools	269	304	139	234
Examinations as to cleanliness	24,224	28,132	15,178	14,413
Minor ailments treated at the Guildhall	258	249	365	738
Total attendances for treatment	1,399	1,040	1,204	2,966
Total attendances for inspection	285	320	134	172

Treatment at the Eye Clinic.—The number of children examined at the Clinic was 149, of whom 130 were ordered spectacles and 117 of these have obtained them.

The spectacles are being provided by a local firm at the following prices :—9/- for spheres and 12/6 for cylinders or spheres and cylinders.

Open Air School.—The premises which opened in July, 1916, as a temporary measure until something more suitable could be obtained have been added to in order to accommodate thirty children. The original number for which sanction was given by the Board of Education was twenty.

The resumption of routine inspection in May, 1919, has led, as was expected, to the discovery of a larger number of children for whom such a school is required, and for a considerable length of time now the Hygiene Committee has been endeavouring to obtain a suitable site for a school which will provide not only for delicate children but also for the feeble-minded.

At first the school was opened only for a part of the year but now it is open for the whole year, as it has been found by experience that the children's physical condition improves more noticeably during cold weather than during the hot summer months.

The numbers admitted each year has been 30 in 1916, 42 in 1917, 22 in 1918 and 29 in 1919. There were 35 children on the register at the beginning of 1919 and 33 at the end of the year, 29 new children being admitted and 42 leaving during the year.

The condition of those leaving the school in 1919 was:—Fit to resume attendance at the ordinary school 35; left on reaching 14 years of age 3; going to a Sanatorium 1; parents refusing to allow dental treatment 3 (in one family).

In addition to those delicate children who are suitable for an Open-Air School, there is a considerable number of physically defective children many of whom attend and are capable of attending the ordinary day schools (see Table III).

Backward and Mentally Deficient Children.—The Hope Class in Paradise Street began the year with 21 children on the roll and ended it with 34. During the year 17 children were admitted and 4 left. Of the four leavers three had reached 14 years of age and one was sent to an Institution for the feeble-minded. Including this case the number sent to Institutions by the Education Committee was five.

Three cases were notified to the Local Control Authority one as imbecile and 2 as feeble minded and ineducable.

Home supervision of doubtful and definitely feeble-minded children is exercised at the request of the Education Committee by the Cambridge Voluntary Association for the Mentally Defective from whom periodical reports are received.

Epileptic Children.—One case unable to attend the Elementary School is awaiting a vacancy in a home. The other known cases, usually of a mild type, are in attendance at the ordinary schools, the total number being 8.

Employment of School Children.—From information kindly supplied by the Head Teachers the following particulars have been obtained.

The total numbers employed are 333 boys and 130 girls. The boys work on an average 11 hours and the girls $5\frac{1}{4}$ hours per week. The hours the boys work vary within very wide limits from an hour on Saturday only, to 32 hours a week, including 11 on Saturday.

The ages of children employed are :—

	6	7	8	9	10	11	12	13	14	15 yrs.
Boys	1	1	8	14	23	42	92	117	33	2
Girls	—	—	3	9	30	22	29	31	6	—

The child of six years is 6 yrs and 10 months old and is said to be employed on Saturday between 9 and 1, and 2 to 4, driving cows. The child of 7 years old is employed all day on Saturday "taking out goods" for a greengrocer.

One eight year old child is engaged on errands on school days, after school till 1 o'clock, and after school till 5 o'clock, and on Saturdays between 9 and 1, and 2 and 5 o'clock.

The remaining eight year old children are evidently only employed on occasional errands on Saturdays, and ought perhaps not to be regarded as engaged in an employment. The same applies to many of the other children.

The occupations in which the children are employed are given as follows :—

Boys.				Girls.			
Errands	...	...	142	Errands	...	...	67
Delivering Papers	...	...	20	Housework	...	...	19
" Milk	...	...	14	Minding Baby	...	...	16
" Bread	...	...	12	Laundrywork	...	...	9
" Parcels	...	...	13	Delivering Papers	...	...	4
" Groceries	...	...	10	" Parcels	...	...	2
Farm or Dairy work	...	...	14	Serving in Shop	...	...	2
House Work	...	...	13	and the remainder in occasional			
Barbers' boys...	...	...	6	odd jobs or errands, &c.			
Gardening	...	...	6				
Assisting Butcher	...	...	5				
and the remainder in various							
jobs and general help.							

Only six of the boys appear to be engaged in selling papers in the street.

There is room for very wide difference of opinion on the question of the employment of school children, but there can be no doubt whatever about the propriety of stringent regulation of child employment. Employment as such is not necessarily injurious, it may indeed be positively beneficial in many cases, but injury is fairly certain to follow where the employment is such (1) that it does not permit of the child getting sufficient rest and when the hours of sleep are necessarily curtailed ; (2) where the employment does not allow sufficient time for proper meals to be taken ; or (3) where it exposes the child to inclement weather without any opportunity or possibility of changing boots and clothing.

The draft bye-laws under the Employment of Children Act, 1903, and the Education Act, 1918, which are at present under consideration prohibit altogether the employment of children in certain occupations. No child under 12 may be employed in any occupation, while children between 12 and 14 may be employed only :

- (a) On School days between the hours of 5 p.m. and 7 p.m.
 (b) On all Week days when school is not open, for not more than four hours between 8 a.m. and 7 p.m. The hours of employment shall be so arranged that every child shall be free for rest and recreation for a continuous period of not less than 5 hours between 12 noon and 7 p.m.

and then only when certain regulations are complied with.

The age for street trading is raised for girls to 16 years and for boys to 15 years, and then only upon certain conditions as to hours, physical and mental fitness, &c.

TABLE I.—Number of Children inspected 1st January to 31st December, 1919.

Entrants.

Age	...	...	...	3	4	5	6	Other Ages.	Total.
Boys	...	...	...	33	72	106	124	...	335
Girls	...	...	...	44	71	108	113	...	336
Total	...	...	...	77	143	214	237	...	671

Age	...	...	Inter- mediate. 8	Leavers.			Other Ages.	Total.	Grand Total.
				12	13	14			
Boys	...	...	106	91	124	14	...	335	670
Girls	...	...	77	83	70	10	...	240	576
Total	...	...	183	174	194	24	...	575	1246

B. Special inspections.

Age	Special	Re-Examinations
7, 9, 10 11.	Cases.	(No. of Children re-examined).
Boys 69	23	108
Girls 42	23	98
Total 110	46	206

C. Total number of individual children inspected by the Medical Officer as Routine or Special Cases. (No child being counted more than once in a year).

No. of Individual Children inspected ... 1402

TABLE II.—Return of Defects found in the course of medical inspection in 1919.

Defect or Disease.					Routine Inspections.		Specials	
					Number referred for treatment.	Number requiring to be kept under observation, but not referred for treatment.	Number referred for treatment.	Number requiring to be kept under observation, but not referred for treatment.
Skin	Malnutrition	...	...	...	—	9	—	1
	Uncleanliness :							
	Head (nurse's inspections)	...		...	—	1	3847	—
	Body	...	...	...	—	—	—	—
	Ringworm :							
	Head	...	...	...	—	—	37	—
	Body	...	...	...	—	—	21	—
	Scabies	...	...	...	—	—	—	—
	Impetigo	...	...	...	—	—	—	—
	Other Diseases (not tubercular)	...		...	—	2	—	—
Eye	Blepharitis	...	...	...	—	—	—	—
	Conjunctivitis	...	...	...	1	4	—	2
	Keratitis	...	...	...	—	—	—	—
	Corneal Ulcer	...	...	..	—	—	—	—
	Corneal Opacities	...	...	...	—	—	—	—
	Defective Vision	..	...	...	30	10	7	7
	Squint	...	...	...	1	1	—	—
Ear	Other conditions	...	...	...	—	—	—	—
	Defective Hearing	...	...	...	7	—	2	—
	Otitis Media	...	...	...	—	—	—	—
	Other Ear Disease	...	...	...	6	3	—	—
Nose and Throat	Enlarged Tonsils	...	...	...	13	61	—	7
	Adenoids	...	...	...	22	15	4	8
	Enlarged Tonsils and Adenoids	...	...	...	11	13	4	3
	Other Conditions	...	...	...	1	—	—	—
Teeth.	Defective Speech	...	...	...	—	—	—	—
	Dental Disease (see Dental Report)	...	...	...	—	—	—	—
Heart and Circulation	Heart Disease :							
	Organic	...	...	...	1	18	—	3
	Functional	...	...	...	1	9	—	1
Lungs	Anæmia	...	...	...	4	46	1	10
	Bronchitis	...	...	...	—	—	—	—
	Other Non - Tubercular Diseases	...		...	—	—	—	—

Defect or Disease.					Routine Inspections.		Specials.				
					Number referred for treatment.	Number requiring to be kept under observation, but not referred for treatment.	Number referred for treatment.	Number requiring to be kept under observation, but not referred for treatment.			
Tuber- culosis	{	Pulmonary :									
		Definite	...	...	...	—	—	—	1
		Suspected	...	...	...	1	5	—	5
		Non-Pulmonary	...	...	...	—	—	—	—
		Glands	...	...	...	—	1	—	—
		Spine	...	...	...	—	—	—	—
		Hip	...	...	...	—	1	—	1
		Other Bones and Joints	...	...	...	—	—	—	—
		Skin	...	...	...	—	—	—	—
Nervous System	{	Other Forms	...	...	...	—	—	—	—
		Epilepsy	...	...	...	—	—	—	—
		Chorea	...	...	...	—	1	—	—
		Other Conditions	...	...	...	10	3	—	2
Deform- ities	{	Rickets	...	...	...	—	1	—	—
		Spinal Curvature	...	...	...	—	1	—	—
		Other Forms	...	...	...	—	—	—	1
Other Defects or Diseases					...	10	15	—	10		
Number of Individual Children having defects which required Treatment or to be kept under observation					103	196	19	33

TABLE III. Numerical returns of all Exceptional Children in the Area in 1919 (as obtained from Head Teachers).

			Boys.	Girls.	Total.
Blind (including partially blind), within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893.		Attending Public Elementary Schools ...	3	2	5
		Attending Certified Schools for the Blind	—	—	—
		Not at School ...	—	—	—
Deaf and Dumb (including partially deaf), within the meaning of the Elementary Education (Blind and Deaf Children) Act, 1893.		Attending Public Elementary Schools ...	16	9	25
		Attending Certified Schools for the Deaf	5	2	7
		Not at School ...	1	—	1
Mentally Deficient	Feeble-minded	Attending Public Elementary Schools ...	16	9	25
		Attending Certified Schools for Mentally Defective Children...	12	4	16
		Notified to the Local Control Authority by Local Education Authority during the Year. ...	—	—	—
		Not at School ...	1	—	1
	Imbeciles	At School ...	—	—	—
		Not at School ...	—	1	1
	Idiots	—	—	—	—
Epileptics		Attending Public Elementary Schools ...	6	2	8
		Attending Certified Schools for Epileptics	—	—	—
		In Institutions, other than Certified Schools	—	—	—
		Not at School ...	1	1	2

			Boys.	Girls.	Total.
Physically Defective	Pulmonary Tuberculosis	Attending Public Elementary Schools ...	11	11	22
		Attending Certified Schools for Physically Defective Children ...	—	1	1
		In Institutions other than Certified Schools	2	2	4
		Not at School ...	5	8	13
	Crippling due to Tuberculosis	Attending Public Elementary Schools ...	6	6	12
		Attending Certified Schools for Physically Defective Children ...	2	—	3
		In Institutions other than Certified Schools	—	—	—
		Not at School ...	1	2	3
	Crippling due to causes other than Tuberculosis, <i>i.e.</i> , Paralysis, Rickets, Traumatism.	Attending Public Elementary Schools ...	19	17	36
		Attending Certified Schools for Physically Defective Children ...	—	—	—
		In Institutions other than Certified Schools	—	—	—
		Not at School ...	2	—	2
	Other Physical Defectives, <i>e.g.</i> , delicate and other Children suitable for admission to Open-Air Schools ; Children suffering from severe Heart Disease.	Attending Public Elementary Schools ...	48	77	125
		Attending Open-Air Schools ...	3	2	5
		Attending Certified Schools for Physically Defective Children other than Open-Air Schools ...	—	—	—
		Not at School ...	1	1	2
Dull or Backward.		Retarded 2 years ...	99	103	202
		Retarded 3 years ...	47	27	74

TABLE IV. Treatment of Defects of Children during 1919.
A. Treatment of Minor Ailments.

Disease or Defect.	Number of Children.			
	Referred for treatment.	Treated.		Total.
		Under Local Edu- cation Authority's Scheme.	Otherwise.	
Skin	—	—	—	—
Ringworm—Head... ..	64	28	—	28
" Body..	21	21	—	21
Scabies	30	30	—	30
Impetigo	301	301	—	301
Minor Injuries	9	9	—	9
Other Skin Disease	7	7	—	7
Ear Disease	27	27	—	27
Eye Disease (external and other)	146	146	—	—
Miscellaneous	219	219	—	219

B. Treatment of Visual Defects.

Referred for Refrac- tion.	Under Local Edu- cation Authority's Scheme—Clinic	By Private Practi- tioner or Hospital.	Number of Children.						
			Otherwise.	Total.	For whom glasses were prescribed.	For whom glasses were provided.	Recommended for treatment other than by glasses.	Received other form of treatment.	For whom no treat- ment was considered necessary.
149	149	—	—	149	130	117	—	—	19

C. Treatment of Defects of Nose and Throat.

Referred for Treatment.	Number of Children.			
	Received Operative Treatment.			Received other forms of Treatment.
	Under Local Education Authority's Scheme Clinic or Hospital.	By Private Practitioner or Hospital.	Total.	
40	13	1	14	3

D. Treatment of Dental Defects.
1.—*Number of Children dealt with.*

	Age Groups.										"Specials."	Total.
	5	6	7	8	9	10	11	12	13	14		
a. Inspected by Dentist... ..	639	710	776	787	844	746	721	757	503	116	348	6947
b. Referred for Treatment	4601										86	4687
c. Actually Treated...	3785										56	3841
d. Re-Treated* ... (Result of Periodical Re-Examination)	2871										17	2888

* It is understood that cases under this head are also included under (c) above.

In this table the 348 Special cases consist of 345 children, of different ages, who were examined twice on account of removal from one school to another in the area which was subsequently inspected, and 3 children of 15 years of age. "Treatment" in this table is understood to include all conditions, fillings, extractions and dressings.

2.—*Particulars of the Time Given and of Operations Undertaken.*

No. of Half Days devoted to Inspection. 1	No. of Half Days devoted to Treatment. 2	Total No. of Attendances made by Children at the Clinic. 3	No. of Permanent Teeth.		No. of Temporary Teeth.		Total No. of Fillings. 8	No. of Administrations of General Anaesthetics in (4) and (6). 9	No. of Other Operations.	
			Extracted. 4	Filled. 5	Extracted. 6	Filled. 7			Permanent Teeth. 10	Temporary Teeth. 11
125	645	4594	105	3981	4187	0	4181	0	56	1070

TABLE V.—Summary of treatment of defects as shown in Table IV. (A, B, C, D and F, but excluding E.)

	Number of Children.			
	Referred for Treatment.	Treated.		
		Under Local Education Authorities Scheme.	Otherwise.	Total.
Minor Ailments ...	824	788	—	788
Visual Defects ...	149	130	—	130
Defects of Nose and Throat ...	40	13	4	17
Dental Defects ...	4689	3841	—	3841
Other Defects ...	—	—	—	—
Total ...	5702	4772	4	4776

TABLE VI.—Summary relating to children medically inspected at the routine inspections during the year 1919.

(1)	The total number of children medically inspected at routine inspections*... ..					1246
(2)	The number of children in (1) suffering from defects (other than uncleanliness or defective clothing or footgear) who require to be kept under observation (but not referred for treatment)					229
(3)	The number of children in (1) suffering from :					
	Malnutrition	...	...	...	...	10
	Skin Diseases	...	...	...	...	19
	Defective Vision (including Squint)	...	...	...	...	27
	Eye Disease...	...	...	...	...	41
	Defective Hearing	...	...	...	...	19
	Ear Disease...	...	...	...	...	18
	Nose and Throat Diseases	...	...	...	...	350
	Enlarged Cervical Glands	...	...	...	...	574
	Defective Speech	...	...	...	...	12
	Dental Disease (see Dental Report)...	...	...	...	...	—
	Heart Disease—					
	Organic	...	...	...	...	43
	Functional	...	...	...	...	28
	Anaemia	...	...	...	...	121
	Lung Disease (non tubercular)	...	...	...	...	36
	Pulmonary	definite	...	...	...	—
		suspected	...	...	...	6
	Non Pulmonary	...	...	...	...	—
	Disease of Nervous System	...	...	...	...	14
	Deformities	...	...	...	...	6
	Other Defects and Diseases	...	...	...	...	41
(4)	The number of children in (1) which were referred for treatment (excluding uncleanliness, defective clothing, &c.) ...					103
(5)	The number of children in (4) who received treatment for one or more defects (excluding uncleanliness, defective clothing, &c.)					37

* Specials are not included in this Table.

BOROUGH OF CAMBRIDGE

(Education Committee.)

REPORT

ON

DENTAL INSPECTION & TREATMENT

OF

SCHOOL CHILDREN

For the Year 1919.

BY

WILLIAM H. JONES, M.A., L.D.S.,

BOROUGH DENTIST.

IN MEMORIAM.

SEDLEY TAYLOR, M.A.,

FOUNDER OF THE CAMBRIDGE DENTAL INSTITUTE FOR CHILDREN.

HIS GENEROSITY EQUIPPED AND MAINTAINED THIS PIONEER CLINIC FOR THE
FREE TREATMENT OF THE DENTAL DEFECTS OF ELEMENTARY SCHOOL CHILDREN

FROM JULY 1907 TO APRIL 1909,

FOR WHICH BENEVOLENT AND DISINTERESTED SERVICE HE RECEIVED

THE FREEDOM OF THE BOROUGH,

THE HIGHEST HONOUR IN THE GIFT OF THE MUNICIPALITY, AS A MARK OF
GRATITUDE AND ESTEEM.

GEORGE CUNNINGHAM, M.A.,

HONORARY DIRECTOR OF THE CAMBRIDGE DENTAL INSTITUTE FOR CHILDREN

HIS HIGH PROFESSIONAL ABILITY AND INDEFATIGABLE ZEAL SURMOUNTED
THE INITIAL DIFFICULTIES OF ORGANISING AND MAKING POPULAR A NEW
BRANCH OF PUBLIC SERVICE AND SO MORE CLOSELY ALLIED DENTAL
SURGERY TO THE SCIENCES SEEKING TO PREVENT THE ONSET OF DISEASE.

PRIVATUS ILLIS CENSUS ERAT BREVIS, COMMUNE MAGNUM.

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THE DENTAL INSTITUTE,
34, PARK SIDE,
CAMBRIDGE.

April 22nd, 1920.

To the Chairman and Members of the Education Committee.

LADIES AND GENTLEMEN,

I have the honour to submit the Twelfth Report of the working of the Dental Institute.

This Report shows a further decrease in the extent of the decay of the temporary teeth and 60·4 per cent. of all temporary teeth examined were found sound.

During the year the entire round of the Schools was completed. This was due to the appointment of a whole-time Assistant on May 1st and to the part-time help rendered by Mr A. W. Gant, from January until September, when the arrears were finally overtaken. The re-establishment of an Annual Inspection will greatly facilitate the work.

I beg to acknowledge assistance in the collection of the statistical data, from over 8,000 charts, on which this Report is based, from the Assistant Dentist (Mr L. Machin, L.D.S., Eng.), and also from Miss E. Munsey.

I have appended to the usual information certain Tables omitted from the Report for the year 1916.

I am, Ladies and Gentlemen,

Your obedient Servant,

WILLIAM H. JONES.

Report on the Dental Inspection and Treatment of School Children.

FOR THE YEAR 1919.

I.—SCOPE OF THE SCHEME.

The Twelfth Report on the working of the Dental Institute covers the year 1919, during which every elementary school in the Borough has been inspected and treatment offered, wherever necessary, to all children from five years of age and upwards. In addition, a number of children who were only four years of age have received treatment, in order that dental conditions likely to cause ill health or discomfort might be remedied with the least possible delay. Too much stress cannot be laid on the fact that all treatment extended is in the nature of prevention from more serious evils, and parents would be wise to bear this fact, carefully, in mind.

In addition to the ordinary routine inspection and treatment, the children attending Milton Road, Park Street and Melbourne Place Higher Grade Schools have also been included. In these schools the general age limit of treatment has now reached all children under thirteen years of age. In each succeeding year the children now attending will be "followed up" until, in the course of two years, every child is included, new children being added each year in the younger groups. By this means all the children in the Borough will be on an equality with regard to facilities for dental treatment, and it will be possible to go forward evenly with any general extension of the age to which scholars may be required to remain in attendance at school. Treatment in this group of schools is now given without the pre-payment of a nominal fee, the abolition of which has reduced the number of refusals and removed an obstacle to the disinterested advice given by the Teachers to the children in their classes to accept treatment. This valuable persuasive factor was distinctly hampered by the fee system, and other considerations apart, the expense in time and labour of collecting the fees, rendered them practically of no financial gain.

Dental inspection and treatment was also accorded to the boys resident at the Littleton House School, Barton Road, Cambridge, and to the scholars at the Open-Air School, prior to admission,

II.—SUMMARY OF WORK DONE.

A.—Table showing the number of children examined and the number treated during the year 1919 :—

Month.	No. of Children Examined	Number of Children Treated for :—			No. of Children Refusing Further Treatment
		Fillings only.	Fillings and Extractions	Extractions only.	
January ...	627	75	71	145	—
February...	369	139	72	79	—
March ...	496	131	58	142	2
April ...	491	59	53	103	—
May ...	593	153	101	139	1
June ...	868	164	118	171	3
July ...	716	98	83	209	—
August* ...	—	—	—	—	—
September	813	186	129	97	—
October ...	872	99	130	337	—
November	818	110	76	123	—
December	284	110	24	34	—
Total ...	6947	1324	915	1579	6

* Clinic closed for vacation.

It will be seen that during the year 1919 the number of children examined was 6,947. This total is 1938 more than in the year 1918, and includes 345 children who were examined twice on account of removal from one school to another school in the area, which was subsequently inspected.

The total number of children treated during the year 1919 was 3,818, being a proportion of 54·9 per cent. of the children examined.

The number of children attending the Institute for fillings during the year 1919 was 2,239, of whom only 6 refused to attend a second time when required, and consequently did not have all the work necessary completed. Thus, the permanent teeth of 2,233 children were made "artificially sound."

The number of appointments offered to children requiring fillings was 2,907, of which 502 were not accepted, a proportion of 17·2 per cent.

The number of appointments offered for extraction was 1923 of which 344 were not accepted, a proportion of 17·8 per cent.

Only 25 children attended the Institute who required Temporary teeth treating with nitrate of silver to arrest the decay and who had neither fillings nor extractions.

The necessity for a centrally situated Institute is emphasised by the fact that 610 children sought advice, without appointment, during the year. It may be stated that children in pain may be sent to the Institute, during school hours, without an appointment.

The number of children who attended for fillings on more than one occasion was 166.

B.—Table showing the number of Operations Performed during the year 1919.

Month.	FILLINGS.			EXTRACTIONS.		Teeth Treated with Nitrate of Silver.
	Amalgam.	Amalgam and Cement.	Amalgam with Root Canal treatment	Temporary Teeth.	Permanent Teeth.	
January ...	130	116	3	408	7	132
February ...	206	265	5	434	5	127
March ...	150	206	4	297	8	144
April ...	118	109	1	225	10	117
May ...	240	200	2	350	14	62
June ...	295	238	3	499	6	91
July ...	203	124	—	525	12	57
August ...	—	—	—	—	—	—
September ...	361	203	7	460	13	102
October ...	242	145	5	819	13	162
November ...	183	112	3	306	7	44
December ..	145	131	7	64	10	32
Total ...	2273	1849	40	4187	105	1070

In addition to the operations tabulated, 19 teeth were filled with cement only; in 12 cases the teeth were scaled; in 26 cases dressings were applied to the gums; in 17 cases the gums were lanced to assist the emergence of permanent teeth and relieve the tension; and in 1 case the sharp broken edges of front (or incisor) teeth, injured as the result of a fall were trimmed into a slightly condition.

In short 4,181 fillings, 4,292 extractions and 1,126 sundries were completed, making a total of 9,599 operations performed during the year 1919.

The average number of fillings inserted for each child treated was 1.8, as compared with 2 in the year 1918. The exact number of teeth filled was 3,981. The number of teeth filled is less than the number of fillings, chiefly because many upper molars required two fillings, one in each crown fissure, to make them sound. Of the fillings 2,273 were amalgam alone, but in 1,849 cavities the decay had penetrated so deeply that a lining of non-conducting material (cement) had to be inserted under the metal filling. On account of greater sensibility, 19 cavities had to be filled entirely with cement, and 105 required root canal treatment in addition to the filling. The above variations indicate the progressive severity of the nature of the filling operations required. The less simple fillings numbered 1,973, an increase of 537 as compared with the year 1918. This increase is due to the period of re-inspections having risen, owing to shortage of staff, from one year to fifteen months and it may confidently be predicted that the restoration of annual inspection will reduce the number of the more severe filling operations with coincident saving of time.

No temporary teeth were filled during the year 1919, but 1,070 were treated with applications of silver nitrate for the purpose of relieving toothache or arresting the decay.

Of the temporary teeth also 4,187 were extracted. These teeth either had the points of their roots exposed or were exciting the formation of septic matter. The former condition is serious in that the sharp edge of the root, by constant irritation of the cheek or tongue, is certain to lead to an ulcerative process, which results in a scar, with the formation of a dangerous and unhealthy pocket. The latter condition leads to a discharge of septic fluid or pus into the mouth which is continuously and unconsciously swallowed by the child, with adverse results to its general well-being. Further, the timely removal of these septic fragments tends to preserve the crowns of the permanent teeth which may be emerging underneath, and leads to a more regular arrangement of the permanent dentition.

If we add to the 1,579 children attending for "extractions only," the 915 children attending for "fillings and extractions," we obtain a total of 2,494 children who attended for extractions. The average number of temporary teeth extracted for each of these children was 1.7. Parents may rest assured that in every case where temporary teeth are extracted, these are actually harmful and producing unhealthy and dangerous conditions, and not likely to be speedily cast off by the ordinary processes of nature.

During the year under review 105 permanent teeth were extracted, 52 for purposes of regulating the teeth in cases of overcrowding and 53 to relieve pain when other remedial measures were impossible. In addition the examination revealed the fact that 32 children had 43 permanent teeth extracted elsewhere.

During the year also 65 certificates were granted to "leavers" seeking situations in which a good condition of the teeth was considered essential.

III.—SUMMARY OF ALL EXAMINATIONS.

C.—Table showing the results of an examination of the Teeth of Elementary School Children.

Age.	Number of Children Examined.	Number of Temporary Teeth			Number of Permanent Teeth		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
5 Years	639	8956	2885	581	226	17	2
6 "	710	7653	3486	1001	2573	259	—
7 "	776	6120	3499	1111	5329	559	9
8 "	787	4518	2676	993	7557	677	24
9 "	844	3250	2242	893	10902	803	91
10 "	746	2126	1193	537	11866	800	119
11 "	721	1413	672	356	13721	777	182
12 "	757	635	277	253	17107	1066	237
13 "	503	188	90	73	11665	812	189
14 & 15	119	31	20	12	2890	210	54
Total	6602	34890	17020	5810	83836	5980	907

D.—Table calculated from Table C giving the average results for 100 Children in Each Year of Age.

Age.	Number of Children Examined.	Number of Temporary Teeth			Number of Permanent Teeth		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
5 Years	100	1401	451	90	33	2	3
6 "	100	1077	490	140	362	36	—
7 "	100	788	450	143	686	72	1
8 "	100	574	340	126	960	86	3
9 "	100	396	265	105	1303	95	10
10 "	100	283	159	71	1590	107	15
11 "	100	195	93	49	1903	107	25
12 "	100	83	36	33	2259	140	31
13 "	100	37	17	14	2319	161	37
14 & 15	100	26	16	10	2428	176	45

The actual number of children examined during the year 1919 was 6602. In addition 345 children had the benefit of being examined twice. These children owed their second examination to removal from one school to another in the area.

The temporary teeth decayed are arranged in two divisions, those which needed extraction (unsaveable), and those which, although decayed, were better left in position for the time being (saveable) to assist in mastication.

Although the same terms are applied to the permanent teeth decayed, they are divided into those which could be filled and so made artificially sound (saveable), and those in which the decay had progressed too far for this to be attempted (unsaveable).

Table C shows the result of the examination of the teeth of the children, whilst Table D shows the figures in the preceding table expressed in the ratio of 100 children of each age, to enable comparison with the figures given with the reports for previous years.

It may be perceived that the examination comprehended 148,443 teeth. Of 57,720 temporary teeth 60·4 per cent. were sound. This is an increase of 1 per cent. over the corresponding proportion for the year 1915* and demonstrates a further improved condition in the temporary dentition. The percentage of decayed saveable temporary teeth has diminished from 29·7 in the year 1915 to 29·4 in the year 1919. There is a decrease of 267 in the number of unsaveable temporary teeth, and the proportion of this class has also decreased from 10·8 in the year 1915 to 9·9 in the year 1919.

With regard to the permanent dentition, all teeth filled in previous years, which showed no signs of subsequent decay, have been counted as sound. Consequently, of 90,723 permanent teeth, no less than 83,836 were sound (92·4 per cent.). As during the year 3,981 permanent teeth were made sound, it will be seen that the number of decayed saveable permanent teeth left untreated was reduced to 1,999, of which 937 occurred in mouths with unsaveable permanent teeth. The number of permanent teeth, therefore, which parents declined to have filled was 1,062 (1·1 per cent.), which occurred in the mouths of 614 children. Apart from treatment during the year, comparison with the Report for the year 1915 shows that there is an increase of ·7 per cent. in the sound permanent teeth.

It will be noticed from Table C that, in the year 1919, the examinations discovered a total of 907 unsaveable permanent teeth. These occurred in the mouths of 543 children, and the number of unsaveable permanent teeth possessed by each of these children is here shown.

* The Report for the Year 1915 was the last Report containing statistics of the actual conditions found. The statistics for the Years 1916, 1917 and 1918, although prepared were not published on account of the necessity for economy during that period.

*I.—Table showing the Distribution of Unsaveable Permanent Teeth.

Year.	Number of Children grouped with the Number of unsaveable Permanent Teeth in each Mouth.						Total Number of Children with Unsaveable Permanent Teeth.	Total Number of Unsaveable Permanent Teeth.
	I.	II.	III.	IV.	V.	VI.		
1919	303	155	54	24	6	1	543	907

* Tables indicated alphabetically may be compared with similar Tables in Previous Reports. Tables indicated numerically are usually peculiar to this Report.

The number of children with unsaveable permanent teeth has increased 183 as compared with the year 1915, whilst the number of unsaveable permanent teeth has also increased from 632 in the year 1915 to 907 in the year 1919. This increase, which was anticipated in the Report for the year 1917, is in large measure due to the failure with an insufficient staff to maintain the previous standard of annual re-examinations. During the War a complete round of the schools took over 14 months, from Jan. 1st, 1916, to complete, and the additional delay of over two months has added to the number of permanent teeth becoming unsaveable. A year is the maximum that should elapse between inspections if this result is to be avoided.

E.—Table showing the Number of Children Examined, and the Number and Percentage having no Decay present, as also the Number and Age of Children without Permanent Teeth emerged, and the Number and Age of Children who had lost all their Temporary Teeth.

Age.	Number of Children Examined.	No Decay including Both Dentitions.		Number of Children without Permanent Teeth	Number of Children without Temporary Teeth
		Number of Children.	Percentage		
5 Years	639	107	16·7	529	—
6 "	710	51	7·2	116	—
7 "	776	46	5·9	17	—
8 "	787	37	4·7	2	2
9 "	844	38	4·5	—	20
10 "	746	79	10·6	—	72
11 "	721	126	17·4	—	183
12 "	757	166	21·9	—	373
13 "	503	120	23·8	—	306
14 & 15 Years	119	23	19·3	—	87
Total	6602	793	12·0	664	1043

Table E shows that on examination 793 children were found with sound teeth (both dentitions) and mouths entirely free from decay. In addition, 165 children possessed no decayed temporary teeth who had decayed permanent teeth, and 2821 children possessed no decayed permanent teeth who had decayed temporary teeth. In many of the latter cases the permanent teeth had been made sound in previous years and needed no further treatment when re-examined. With regard to the 793 children in Table E, this applies only to a proportion, as the majority of these children had naturally sound permanent teeth. In the younger groups the absence of permanent teeth, and in the elder groups the absence of temporary teeth influences the percentages, and the number of children minus one or other dentitions is included in the table.

II.—Table showing the Age and Number of Children Inspected, and the Number and Percentage having no Decay, one or two, three or four, five or six, seven or more Decayed Teeth present, both Dentitions combined, before Treatment in the year 1919.

Age.	No. of Children Examined.	Number and Percentage of Children who each had before treatment.									
		None Decayed.	%	One or Two Decayed.	%	Three or Four Decayed.	%	Five or Six Decayed.	%	Seven or More Decayed.	%
5 Years	639	107	16·7	87	13·6	111	17·3	87	13·6	247	38·6
6 „	710	51	7·2	60	8·5	101	14·2	119	16·7	379	53·4
7 „	776	46	5·9	58	7·5	134	17·2	158	20·3	380	48·9
8 „	787	37	4·7	97	11·1	183	24·5	200	25·4	270	34·3
9 „	844	38	4·5	165	19·5	237	28·0	185	21·9	219	25·9
10 „	746	79	10·6	219	29·3	227	30·4	122	16·3	99	13·2
11 „	721	126	17·4	267	37·0	192	26·6	80	11·0	56	7·7
12 „	757	166	21·9	294	38·8	189	24·9	65	8·5	43	5·5
13 „	503	120	23·8	178	35·3	139	27·6	40	7·9	26	5·1
14 & 15 „	119	23	19·3	46	38·6	31	26·1	15	12·6	4	3·4
Total ...	6602	793	12·0	1471	22·2	1544	23·3	1071	16·2	1723	26·1

It will be noticed in Table E that 12 per cent. of all children examined had no decay present in their mouths in either dentition. This is the highest percentage of absolute freedom from decay yet attained, and is '9 per cent. more than in the year 1915.

Table II shows how the decayed teeth found were distributed, and it will be noticed that 45·6 per cent. of the children have four or less teeth decayed. If to this percentage we add the 12 per cent. of children entirely free from decay we find that 42·4 per cent. of all the children examined have more than four decayed teeth apiece, as compared with 48·6 per cent. in the year 1915, a satisfactory decrease of 6·2 per cent. All these figures apply to both dentitions combined and refer to the conditions before treatment in the year 1919. Reference to Table D will show that the temporary teeth were responsible for the large percentage

of children found with more than four decayed teeth. The percentage of children in the worst class (seven or more decayed teeth apiece) has decreased in comparison with the year 1915 no less than 5 per cent.

F.—Table showing the number and age of children with permanent teeth, and the number and percentage having sound permanent teeth, artificially sound permanent teeth after treatment, during the year 1919, one or more unsaveable permanent teeth, and one or more decayed but saveable permanent (which were not treated).

Age.	Number with Per- manent Teeth.	Number of Children whose Permanent Teeth were						Number of Chil- dren who had Decayed Saveable Permanent Teeth and who refused treatment.	
		*Sound.		Made Artifici- ally Sound.		Unsaveable.			
			%		%		%		%
5 Years	110	97	88·2	7	6·4	1	·9	5	4·5
6 "	594	436	73·4	109	18·3	—	—	49	8·2
7 "	759	455	59·9	229	30·17	7	·9	68	8·9
8 "	785	426	54·26	266	33·8	15	1·9	78	9·9
9 "	844	409	48·4	282	33·4	55	6·5	98	11·6
10 "	746	312	41·8	283	36·3	64	8·6	87	11·7
11 "	721	232	40·5	248	34·3	106	14·7	75	10·4
12 "	757	231	30·5	302	39·8	112	14·7	112	14·7
13 "	503	141	28·0	201	39·9	102	20·2	59	11·7
14 & 15	119	26	21·8	58	48·7	28	23·5	7	5·8
Total	5938	2825	47·5	1985	33·4	490	8·2	638	10·7

* Including children made artificially sound in previous years; a tooth was considered sound at re-examinations when it did not need any treatment, irrespective of whether it had been filled or not in previous years.

Table F shows that of the children examined who had permanent teeth 47·5 per cent. had sound permanent teeth, whilst a further 33·4 per cent., as a result of treatment, were made sound during the year. Thus, after treatment, 80·9 per cent. of the children examined with permanent teeth were left with that dentition sound or artificially sound. This percentage is a decrease of 1·5 as compared with the year 1915 and represents 4,810 children, an increase of 639 as compared with that year. Similarly, the number of children with permanent teeth found sound on re-examination has increased 376, while the number made artificially sound has increased 263 as compared with the year 1915.

The proportion of children with unsaveable permanent teeth has increased 1·9 per cent. and the percentage of refusals has decreased ·4 per cent. A consideration of these figures shows the unfortunate effect, anticipated in the Report for the year 1917, of not being able to maintain the standard of annual re-inspections owing to inadequate staffing as a result of the War. The interval between inspections rose generally from 12 to over 14 months and the result is manifested by an increase in the percentage of children with unsaveable permanent teeth. In Table I the number of children with unsaveable permanent teeth is shown to be 543. In Table F, after treatment, this number has been diminished, through extractions, to 490.

The gradual diminution of the refusals of treatment is a satisfactory feature. Of the refusals it may be added that they include all children who did not attend for treatment, whether prevented by sickness or absence from school, and also all intractable children, and all those prevented from attending by parents' dissent.

It may be repeated that if there were no refusals there would, with annual inspections, be no children with unsaveable permanent teeth. Parents incur a great responsibility when they refuse to allow the dental defects of their children to be remedied. In general it may be stated that the refusals now encountered are those repeated from year to year and often affect several children in the same household. It frequently happens now that parents who have refused in previous years bring their children for treatment when the permanent teeth of their children have become unsaveable and are tender and aching. It is to be hoped that the object lesson will benefit the younger children of these parents and that they will perceive that toothache is not a necessary evil and that unsightly teeth are a sign of parental ignorance and neglect.

The number and ages of the intractable children are shown in Table III, in two divisions, children nervously intractable with whom it was possible to reason and those intractable through fear, temper or other cause, with whom it was impossible to reason and of whose teeth it was not possible to make an adequate examination.

III.—Table showing the Age and Sex of all the children examined during the Year 1919 who were intractable through nervousness or fear or other cause.

Degree of Intractability.	Sex.	Age of Children in Years :—										Total
		5	6	7	8	9	10	11	12	13	14	
Open to Persuasion : "Nervous."	Boys	—	2	2	2	5	1	4	2	2	—	20
	Girls	1	5	8	6	8	5	2	3	3	—	41
Not Open to Persuasion "Fearful."	Boys	—	2	3	4	1	1	2	2	2	—	17
	Girls	2	2	—	2	2	7	1	5	1	3	25
Total		3	11	13	14	16	14	9	12	8	3	103

IV.—Table showing Number, Age and Sex of children with abnormal conditions of teeth and associated parts and varying degrees of irregularity of the teeth among the children examined in the Year 1919.

Age.		Total Number of Children Examined.	Number of Children who had:—										
			Abnormal Teeth:—				Irregular Teeth.				Abnormal Conditions.		
			Hypoplasia.	Hutchinson.	Gemination.	Supernumerary.	Transposition.	Upper Teeth Irregular Only.	Lower Teeth Irregular Only.	Both Upper and Lower Teeth Irregular.	Cleft Palate.	Haemophilia.	Infective Stomatitis.
5 Years	Boys	339	—	—	—	—	—	—	—	—	—	—	—
	Girls	300	1	—	2	—	—	—	—	—	1	—	—
6 "	Boys	370	13	1	—	2	—	2	5	1	2	1	1
	Girls	340	2	—	—	—	—	—	4	—	—	—	—
7 "	Boys	417	12	—	1	3	—	4	11	—	1	—	—
	Girls	359	9	—	—	—	—	2	17	5	—	—	—
8 "	Boys	406	17	1	—	2	—	14	12	6	1	1	—
	Girls	381	11	—	1	1	—	18	25	4	1	—	—
9 "	Boys	414	16	—	—	1	—	14	14	11	—	—	—
	Girls	430	12	2	—	1	—	20	25	13	—	—	—
10 "	Boys	344	12	3	3	2	2	18	16	3	—	—	—
	Girls	402	9	—	1	2	—	31	17	12	—	—	—
11 "	Boys	368	9	—	—	—	1	13	12	4	—	—	—
	Girls	353	6	—	—	—	—	18	12	6	—	—	—
12 "	Boys	378	12	—	1	2	—	9	12	8	—	—	—
	Girls	379	8	2	—	2	—	20	16	11	—	—	1
13 "	Boys	302	8	1	—	1	—	14	18	6	—	—	—
	Girls	201	4	2	—	—	—	9	6	1	—	—	—
14 & 15 "	Boys	60	1	1	—	1	—	—	3	3	—	—	—
	Girls	59	—	—	—	—	—	—	1	1	—	—	—
Total 		6602	162	13	9	20	3	206	226	95	6	2	2

In addition to the children shown in Table IV, one case each of the following abnormal conditions was found:—"Open bite," boy of 7 years; "Laterals missing," boy of 12 years; "Persistent temporary canines without irregularity," boy of 13 years; "Microdont teeth," girl of 6 years; "Pyorrhœa alveolaris," girl of 11 years; "Cicatrical attachment," girl of 10 years.

Of the six cases of cleft palate five were associated with "hare-lip."

IV.—SUMMARY OF EXAMINATION OF NEW PATIENTS.

The number of new patients examined for the first time in the year 1919 was 1468.

V.—Table showing the Number, Age and Sex of the Children Examined for the first time in the year 1919, and the Number of Sound, Decayed Saveable and Decayed Unsaveable Teeth of each Dentition that they possessed.

Age.	Number of Boys.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable.	Decayed Unsaveable.	Sound.	Decayed Saveable.	Decayed Unsaveable.
5 Years	339	4729	1558	334	118	9	—
6 "	189	1927	958	341	685	62	—
7 "	82	727	364	148	582	55	—
8 "	33	263	102	48	314	20	—
9 "	36	162	108	51	416	44	6
10 "	24	94	33	21	374	30	6
11 "	17	48	11	18	298	27	2
12 "	18	32	9	14	374	27	1
13 & 14 "	35	15	6	8	812	72	4
Total ...	773	7997	3149	983	3973	346	19

Age.	Number of Girls.	Temporary Teeth.			Permanent Teeth.		
		Sound	Decayed Saveable.	Decayed Unsaveable.	Sound.	Decayed Saveable.	Decayed Unsaveable.
5 Years	300	4227	1327	247	108	8	2
6 "	171	1821	835	234	685	69	—
7 "	61	475	282	114	463	60	—
8 "	35	216	91	71	353	39	3
9 "	40	143	84	56	556	48	6
10 "	32	63	33	32	574	42	6
11 "	15	15	6	11	313	19	3
12 "	19	10	6	15	425	31	6
13 & 14 "	22	1	—	3	539	54	4
Total ...	695	6971	2664	783	4016	370	30

Table V. shows the result of an examination of 1468 school children examined for the first time in the year 1919. Table H shows the results in Table V. for all children under 10 years of age, reduced to a ratio of 100 children for each age and sex, to enable comparison to be made with previous years.

H.—Table showing the number of sound and decayed teeth of the children examined for the first time in the year 1919, expressed in the ratio of 100 children for each age.

Age.	Temporary Teeth.				Permanent Teeth.			
	Sound.		Decayed.		Sound.		Decayed.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
5 Years	1395	1409	558	524	34	36	3	3
6 "	1019	1065	687	625	362	400	32	40
7 "	888	778	624	649	709	759	67	98
8 "	797	616	454	463	951	1008	60	120
9 "	450	357	441	350	1105	1390	139	135

As compared with the year 1915 there has been an increase of sound temporary teeth in the five year old boys and girls and a decrease of decayed temporary teeth in the 5, 6 and 9 year old boys and in the 5, and 9 year old girls.

With the exception of the 5 year old group the number of temporary teeth present has increased and as the number of permanent teeth present will affect the comparisons of the temporary teeth, the latter becomes a question of relative proportions and these are shown in Table VI.

VI.—Table showing the result of a first examination, with regard to the temporary dentition only, of new patients, before treatment in the year 1919.

Age.	No. of Children Examined.	Average Number of Temporary Teeth per Child.	Average Number of Decayed Temporary Teeth per Child.	Proportion of Decayed Teeth to Total Number.
5 Years	639	19.4	5.4	27.8
6 "	360	16.9	6.5	38.6
7 "	143	14.6	6.3	43.3
8 "	68	11.6	4.5	39.3
9 "	76	7.9	3.9	49.5

Since the commencement of the scheme, in the year 1907, the new patients, before treatment, have gained 2.6 sound temporary teeth per average 5 year old child. This gain represents an indirect benefit of dental treatment and has been fully discussed in previous Reports, notably in the year 1914.

V.—SUMMARY OF RE-EXAMINATIONS

The children re-examined fall into three divisions, those who have required no permanent teeth filling in previous years, those who required and accepted such treatment, and lastly those who required and refused such treatment.

VII.—Table showing Results of a re-examination of 2,032 Children whose Permanent Teeth had required no treatment previously.

Age.	Number of Boys.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable.	Decayed Un-saveable.	Sound.	Decayed Saveable.	Decayed Un-saveable.
6 Years	179	2041	767	244	595	63	—
7 "	270	2501	1238	344	1650	122	—
8 "	209	1517	672	255	1986	89	—
9 "	158	864	430	177	1839	92	2
10 "	95	490	162	57	1293	19	1
11 "	84	351	109	54	1417	28	5
12 "	54	123	31	26	1120	41	2
13 "	41	35	6	4	1018	31	—
Total	1090	7922	3415	1161	10918	485	10

Age.	Number of Girls.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable.	Decayed Un-saveable.	Sound.	Decayed Saveable.	Decayed Un-saveable.
6 Years	166	1830	889	177	583	61	—
7 "	234	1994	1027	319	1584	149	1
8 "	178	1149	582	229	1747	103	2
9 "	131	578	298	133	1737	58	—
10 "	86	316	144	70	1420	48	5
11 "	60	183	58	29	1133	21	1
12 "	61	82	21	17	1387	27	5
13 "	18	15	—	6	437	21	4
14 "	8	1	2	—	198	2	9
Total	942	6148	3021	980	10226	490	27

Of the 6,602 children inspected in the year 1919, there were 2,032 or 30·7 per cent. whose permanent teeth had required no treatment previously, 1,090 were boys and 942 were girls. 5 boys and 13 girls were found on re-inspection to have unsaveable permanent teeth. The re-examination also showed that 139 boys and 119 girls had no decay present in either dentition, a further 20 boys and 7 girls had sound temporary teeth only, and 748 boys and 595 girls had sound permanent teeth only. 431 children in this group now found with decay commencing in their permanent teeth accepted treatment and were made artificially sound, but 131 children who were found to have decay similarly starting refused treatment. The proportion of permanent teeth in this group that decayed during the year 1919 was ·4 per head as against ·5 in the year 1915.

Table VII. gives the usual statistics of the "no treatment previously" group.

VIII.—Table showing the Results of a re-examination of 2,348 Children whose Permanent Teeth had been treated and made artificially sound in previous years.

Age.	Number of Boys.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed saveable.	Decayed Un-saveable.
6 Years	1	4	11	1	4	—	—
7 "	53	254	231	53	462	44	1
8 "	136	557	519	129	1489	122	2
9 "	185	598	547	148	2397	180	9
10 "	163	423	296	87	2572	184	8
11 "	205	419	206	96	3833	205	6
12 "	239	240	108	77	5296	299	17
13 "	167	70	33	30	3996	219	10
14 & 15	44	12	8	6	1099	64	6
Total	1193	2577	1959	627	21148	1317	59

Age.	Number of Girls.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
6 Years	3	20	20	3	17	2	—
7 "	43	226	205	42	350	50	2
8 "	126	522	406	111	1097	127	1
9 "	196	640	531	146	2756	165	4
10 "	217	415	312	127	3803	222	10
11 "	200	216	136	52	4194	237	6
12 "	227	79	42	28	5579	337	20
13 "	109	19	8	7	2742	170	15
14 "	34	13	8	3	829	57	4
Total	1155	2150	1848	519	21367	1367	62

Of the 2,348 children comprised in the "treated previously" section there were 929 who required no fresh treatment, as their permanent teeth were found sound on re-examination; 1,357 children required further treatment and 60 children were found to have one or more unsaveable permanent teeth. 1,147 children again accepted treatment and were made sound. 210 children refused the offer of treatment and remained at the end of the year with saveable decayed permanent teeth.

The 60 children with unsaveable permanent teeth in this section and the 18 children in a similar condition mentioned in the preceding section represent those whom an annual examination just fails to prevent having one or more permanent teeth decayed beyond the point at which they may be treated and saved. It is impossible to prevent a slight leakage in dealing with so many mouths, having regard to the rapidity with which some teeth are prone to decay and to the fact that absence from school or sickness may have caused a child to miss the previous dental examination. These "unsaveables" emphasise the necessity for re-examinations at intervals not longer than 12 months. Similarly, the large number of children requiring further treatment illustrates the value of "following up." Children are constantly receiving additions to the permanent dentition, and schemes involving treatment without re-examination largely represent a waste of time, skill and capital outlay.

The 2,348 children comprised in Table VIII. developed a total of 2,684 saveable decayed permanent teeth. This represents the amount of decay arising between inspections. The whole scheme aims at enabling the child to leave school with the full number of permanent teeth free from decay. 80.9 per cent. of all the children examined with permanent teeth were left in the enviable position of having that dentition free from decay. In the particular group under notice the percentage was 88.4, a decrease of .6 as compared with the year 1915. At the start of the scheme 85 per cent. of the children examined had decayed permanent teeth. The position is now more than reversed with regard to the 'treated previously' group and nearly reversed for all the groups

together. This result must have a very important effect on the future general health and well-being of the community, while it may safely be predicted that the economic effects will prove dental treatment to be a very sound investment.

IX.—Table showing the results of a re-examination of 757 children who had refused treatment in previous years.

Age.	Number of Boys.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
6 Years	1	10	6	1	4	2	—
7 "	12	51	48	29	90	25	1
8 "	28	127	119	51	257	58	3
9 "	35	110	98	76	400	75	22
10 "	62	192	118	68	803	123	42
11 "	62	106	88	54	1057	111	54
12 "	67	47	36	46	1384	139	89
13 "	63	24	24	11	1071	147	83
14 "	12	3	1	—	270	37	14
Total	342	670	538	336	5336	717	308

Age.	Number of Girls.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
6 Years	—	—	—	—	—	—	—
7 "	21	92	104	62	148	54	4
8 "	45	167	185	99	314	119	13
9 "	63	155	146	106	801	141	42
10 "	67	133	95	75	1027	132	41
11 "	78	75	58	42	1476	129	105
12 "	72	22	24	30	1542	165	97
13 "	52	10	13	6	1153	105	69
14 "	17	1	1	2	391	43	21
Total	415	655	626	422	6852	888	392

Table IX shows that the number of children who were re-examined and who had refused treatment previously was 757, of whom 162 now accepted treatment and were made artificially sound. Of the remainder, 198 renewed their refusals and represent the ever dwindling number of the persistent class of refusals, and 394 children had unsaveable permanent teeth. The remaining three children had had their teeth made sound by private attendance. In consideration of the other groups re-examined the extent of one year's damage could be traced. In this group only the inevitable effects of neglect can be noted. The result especially as regards the permanent dentition is startling. The group possesses 77 per cent. of the unsaveable permanent teeth found among the 6,602 children examined during the year, while more than a fourth of all the decayed saveable permanent teeth are peculiar to the 757 children of this group.

VI.—SUMMARY OF HYGIENE OF THE MOUTH.

As in previous years, all the children have been classified according to the general conditions of the mouth. For this purpose they were divided into three classes—A, healthy; B, pus discharged into the mouth; C, very unhealthy. It does not always follow that children who refused fillings likewise refused extractions; were this so the division for the children who “refused treatment previously” would show even worse results. The percentages are here shown:—

	A.	B.	C.
New patients	46·4	50·5	3·1
No treatment previously ...	49·1	49·1	1·8
Treated previously ...	71·3	28·4	·3
Refused treatment previously	20·5	74·7	5·8

The principle has been continued of including in the C class only those children whose mouths seem to come within the penal clauses of the Children's Act.

As compared with those seen for a first inspection in the year 1915 the new patients have lost 4·5 per cent. in the A class, gained 6·6 per cent. in the B class and lost 2·1 per cent. in the C class, the latter a very satisfactory feature; the No Treatment Previously group have gained 1·1 per cent. in the B class and lost 1·1 per cent. in the C class, also a satisfactory feature; the Treated Previously group have gained 4·2 per cent. in the A class, lost 2·7 per cent. in the B class and lost ·9 per cent. in the C class, a very satisfactory result in each division; the Refused Treatment Previously group have lost 4·4 per cent. in the A class, gained 10 per cent. in B class and lost 4·6 per cent. in the C class.

The gradual elimination of the C class is a satisfactory feature in each of these classes.

Table X. shows the totals at the foot of Table C. revised in accordance with the amount of treatment actually carried out during the year 1919.

X.

Number of Children.	Temporary Teeth.			Permanent Teeth.		
	Sound.	Decayed Saveable.	Decayed Unsaveable	Sound.	Decayed Saveable.	Decayed Unsaveable
6602	34890	17020*	1623	87817	1999	802

* 1070 teeth of this class treated with nitrate of silver.

The practical difficulties of dealing with the temporary dentition have been dealt with at length in previous reports. The position, however, continues gradually to improve and the enormous decrease in oral sepsis since the scheme commenced may be gleaned from the comparison of the percentages in Table XI.

XI.

Year	Number of Temporary Teeth Inspected.	Temporary Teeth.		
		Percentage Sound.	Percentage Decayed Saveable.	Percentage Decayed Unsaveable.
1908	32341	48.1 %	13.7 %	38.2 %
1913*	44549	59.6 %	35.0 %	5.4 %
1914*	49218	61.8 %	32.3 %	5.9 %
1915*	52262	63.9 %	32.1 %	4.0 %
1919*	53533	65.2 %	31.8 %	3.0 %

* After treatment during the year.

The present method of dealing with the temporary teeth is both directly and indirectly gradually leading to the elimination of the worst and the diminution of the least decayed. Dental care for expectant and nursing mothers, the correct feeding of infants, the abolition of the "comforter," increased attention to the cleansing of the teeth and earlier dental attention than the present starting point of 5 years of age are factors that may be indicated as likely to reduce the incidence of decay in the temporary dentition still further. That such diminution, by ensuring better nutrition to the infant, would result in improved conditions of the permanent teeth at a later age there can be no reason to doubt. The primary causes of dental decay are general and not local, and are associated with malnutrition and general constitutional disorders.

VII.—SUPPLEMENT TO REPORT FOR THE YEAR 1916.

In the summaries of the Report for the year 1919 it will be noticed that comparisons when needed are made with the year 1915. This is rendered necessary by the fact that the statistics for intervening years, although prepared, have not been published on account of the necessity for economy during the War.

In order that the series may be completed the essential tables omitted from the Annual Report for the year 1916 are contained in this supplement and the index letters will, when compared with corresponding tables in the previous summaries, indicate the nature of the following tables.

C.—YEAR 1916.

Age.	Number of children Examined.	Number of Temporary Teeth			Number of Permanent Teeth		
		Sound.	Decayed Saveable	Decayed Un- saveable.	Sound.	Decayed Saveable	Decayed Un- saveable.
5 Years	493	6143	2822	643	301	70	—
6 "	696	7153	3797	1079	2208	536	4
7 "	653	5156	2725	1019	4806	717	17
8 "	617	3681	1990	785	6156	569	37
9 "	680	3049	1657	681	8864	605	70
10 "	499	1642	762	389	8031	449	101
11 "	537	950	528	276	10443	570	107
12 "	479	438	244	161	10534	714	150
13 "	517	204	93	90	12149	894	227
Total	5171	28416	14618	5123	63492	5124	713

D.—YEAR 1916.

Age.	Number of Children Examined.	Number of Temporary Teeth			Number of Permanent Teeth		
		Sound.	Decayed Saveable	Decayed Un- saveable.	Sound.	Decayed Saveable	Decayed Un- saveable.
5 Years	100	1246	572	130	61	14	—
6 "	100	1027	545	155	317	76	0.6
7 "	100	789	417	156	735	109	2
8 "	100	596	322	127	997	92	6
9 "	100	448	243	100	1330	88	10
10 "	100	329	152	78	1609	89	20
11 "	100	176	98	51	1944	106	19
12 "	100	91	50	33	2199	149	31
13 "	100	39	18	17	2348	172	43

I.—YEAR 1916.

Year.	Number of Children Grouped with the Number of Unsaveable Permanent Teeth in each Mouth.							Total Number of Children with Unsaveable Permanent Teeth.	Total Number of Unsaveable Permanent Teeth.
	I.	II.	III.	IV.	V.	VI.	VII.		
1916	208	121	41	16	9	4	1	400	713

E.—YEAR 1916.

Age.	Number of Children Examined.	No Decay including Both Dentitions.		Number of Children without Permanent Teeth	Number of Children without Temporary Teeth
		Number of Children.	Percentage		
5 Years	493	37	7.5	354	—
6 „	696	32	4.6	139	—
7 „	653	28	4.2	10	—
8 „	617	24	3.9	1	1
9 „	680	56	8.2	—	19
10 „	499	52	10.4	—	58
11 „	537	91	16.9	—	145
12 „	479	108	22.5	—	241
13 „	517	150	29.0	—	379
Total	5171	578	11.1	504	843

II.—YEAR 1916.

Age.	No. of Children Examined.	Number and Percentage of Children who each had Before Treatment.									
		None Decayed.	%	One or Two Decayed.	%	Three or Four Decayed.	%	Five or Six Decayed.	%	Seven or More Decayed.	%
5 Years	493	37	7.5	56	11.3	59	11.9	65	13.2	276	56.0
6 „	696	32	4.6	69	9.9	78	11.2	128	18.4	389	55.9
7 „	653	28	4.2	73	11.1	110	16.8	138	21.1	304	46.6
8 „	617	24	3.9	99	16.0	139	22.5	132	21.4	223	36.1
9 „	680	56	8.2	139	20.4	174	25.6	147	21.6	164	24.1
10 „	499	52	10.4	148	29.6	153	30.6	84	16.8	62	12.6
11 „	537	91	16.9	185	34.4	150	27.9	77	14.3	34	6.3
12 „	479	108	22.5	164	34.2	99	20.6	70	14.6	38	8.0
13 „	517	150	29.0	164	31.7	105	20.3	45	8.7	53	10.2
Total	5171	578	11.1	1097	21.2	1067	20.6	886	17.1	1543	29.8

During the year 1916 there were found 44 children who had Temporary Teeth free from decay, but with decayed Permanent Teeth.

F.—YEAR 1916.

Age.	Number with Permanent Teeth.	Number of Children whose Permanent Teeth were :						Number of Children who had Decayed Permanent Teeth and who refused Treatment.	
		*Sound.		Made Artificially Sound.		Unsaveable.			
		No.	%	No.	%	No.	%	No.	%
5 Years	139	103	74·1	29	20·9	—	—	7	5·0
6 "	557	339	60·8	160	28·7	1	0·1	57	10·2
7 "	643	319	49·6	258	40·1	8	1·2	58	9·0
8 "	616	300	48·7	213	34·6	24	4·0	79	12·3
9 "	680	348	51·1	228	33·5	57	8·4	47	7·0
10 "	499	243	48·7	151	30·2	47	9·4	58	11·6
11 "	537	270	50·2	160	29·8	55	12·4	52	9·6
12 "	479	169	35·2	173	36·1	89	18·5	48	10·0
13 "	517	194	37·5	171	33·0	98	18·9	54	10·4
Total	4667	2285	48·9	1543	33·0	379	8·1	460	9·8

* Including Children made Artificially Sound in previous Years ; a tooth was considered sound on re-examination when it did not need any treatment, irrespective of whether it had been filled or not in previous years.

V.—YEAR 1916.

Age.	Number of Boys.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Unsaveable.	Sound.	Decayed Saveable	Decayed Unsaveable.
5 Years	276	3497	1531	367	152	37	—
6 "	100	957	581	210	279	62	—
7 "	34	252	157	73	204	47	3
8 "	20	140	64	36	179	23	—
9 "	20	87	37	31	271	32	2
10 "	10	42	10	7	161	9	4
11 "	18	53	19	13	298	45	6
12 "	8	21	2	3	170	8	—
13 "	—	—	—	—	—	—	—
Total	486	5055	2401	740	1714	263	15

Age.	Number of Girls.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
5 Years	217	2646	1291	276	149	33	—
6 "	110	1149	587	180	389	64	—
7 "	40	301	194	91	269	53	2
8 "	20	94	93	38	181	32	2
9 "	20	69	55	52	243	31	8
10 "	13	41	15	11	203	13	2
11 "	12	19	6	14	238	29	1
12 "	7	—	1	—	175	12	1
13 "	19	14	8	6	486	4	—
Total	458	4333	2250	668	2333	271	16

H.—YEAR 1916.

Age			Temporary Teeth.				Permanent Teeth.			
			Sound.		Decayed.		Sound.		Decayed.	
			Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
5	Years	...	1267	1219	687	722	55	68	13	15
6	"	...	957	1044	791	697	279	353	62	58
7	"	...	741	752	676	712	600	672	144	137
8	"	...	730	470	500	655	895	905	115	170
9	"	...	435	345	340	535	1355	1215	170	195

VI.—YEAR 1916.

Age.		Number of Children Examined.	Average Number of Temporary Teeth per Child.	Average Number of Decayed Temporary Teeth per Child.	Proportion of Decayed Teeth to Total Number.
5 Years	...	493	19.4	7.0	36.0
6 "	...	210	17.4	7.4	42.5
7 "	...	74	14.4	6.9	48.2
8 "	...	40	11.7	5.7	49.3
9 "	...	40	8.2	4.3	53.3

VII.—YEAR 1916.

Age.	No. of Boys.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable.	Decayed Un-saveable
6 Years	253	2664	1403	356	718	147	3
7 "	200	1821	731	250	1262	137	—
8 "	131	1072	368	138	1184	77	—
9 "	88	598	223	65	1053	21	1
10 "	60	315	95	60	874	19	3
11 "	38	170	55	22	631	7	—
12 "	32	93	20	14	658	21	1
13 & 14 "	26	42	7	6	635	4	—
Total	828	6775	2902	911	7015	433	8

Age.	No. of Girls.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable.	Decayed Un-saveable
6 Years	220	2289	1152	320	759	141	1
7 "	181	1653	761	270	1334	156	—
8 "	95	664	282	117	972	44	—
9 "	76	476	146	74	971	32	—
10 "	36	141	60	25	586	21	—
11 "	37	76	27	22	769	8	—
12 "	20	29	6	8	475	7	1
13 & 14 "	26	17	8	6	670	9	2
Total	691	5345	2442	842	6536	418	4

VIII.—YEAR 1916.

Age.	Number of Boys.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
6 Years	4	30	20	2	24	6	—
7 "	80	435	352	122	618	97	1
8 "	140	712	455	135	1504	101	2
9 "	220	881	603	179	2916	171	3
10 "	160	518	264	110	2527	103	1
11 "	194	362	220	86	3770	177	4
12 "	160	150	85	55	3568	184	7
13 "	175	61	31	29	4219	250	7
Total	1133	3149	2030	718	19146	1089	25

Age.	Number of Girls.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
6 Years	9	64	54	11	39	16	—
7 "	69	418	300	89	824	97	—
8 "	144	667	488	181	1575	143	3
9 "	180	654	414	159	2596	153	2
10 "	140	314	207	90	2464	130	3
11 "	168	191	129	57	3503	182	7
12 "	152	84	63	46	3535	212	5
13 "	179	54	22	19	4340	255	17
Total	1041	2446	1677	652	18876	1188	37

IX.—YEAR 1916.

Age.	Number of Boys.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
7 Years	26	160	129	69	131	71	8
8 "	27	137	99	51	198	58	15
9 "	36	159	92	54	383	88	30
10 "	40	95	55	48	588	64	44
11 "	30	40	35	30	483	55	38
12 "	40	37	37	20	756	115	44
13 "	46	25	18	20	949	140	81
Total	245	653	465	292	3488	591	260

Age.	Number of Girls.	Temporary Teeth.			Permanent Teeth.		
		Sound.	Decayed Saveable	Decayed Un-saveable.	Sound.	Decayed Saveable	Decayed Un-saveable.
7 Years	23	116	101	55	164	59	3
8 "	40	189	141	89	363	91	15
9 "	40	125	87	67	431	77	24
10 "	40	76	56	38	608	90	44
11 "	40	39	37	32	751	67	51
12 "	60	24	30	15	1197	155	91
13 "	65	5	7	10	1336	236	120
Total	308	574	459	306	4850	775	348

GENERAL CONDITIONS OF THE GUMS.—YEAR 1916.

	A.	B.	C.
New Patients	46.2	46.4	7.4
No Treatment Previously ...	53.4	44.6	2.0
Treated Previously	71.7	28.0	0.3
Refused Treatment Previously	15.9	78.4	5.7

X.—YEAR 1916.

Number of Children.	Temporary Teeth.			Permanent Teeth.		
	Sound.	Decayed Saveable.	Decayed Unsaveable.	Sound.	Decayed Saveable.	Decayed Unsaveable.
5171	28416	14618*	1603	66677	1939	620

* 1045 of these Teeth treated with Nitrate of Silver.

XI.—YEAR 1916.

Year.	Number of Temporary Teeth Inspected.	Temporary Teeth.		
		Percentage Sound.	Percentage Decayed Saveable.	Percentage Decayed Unsaveable.
1916*	44637	63.6 %	32.7 %	3.6 %

* After Treatment during the Year.